REMARKS

The present application was filed on June 20, 2003 with claims 1 through 17. Claims 1 through 17 are presently pending in the above-identified patent application.

In the final Office Action, the Examiner rejected claims 1-17 under 35 U.S.C. §103(a) as being unpatentable over El-Shimi et al. (United States Patent Number 6,931,405 B2) in view of Aboulnaga et al., "Estimating the Selectivity of XML Path Expressions for Internet Scale Applications" ("Aboulnaga" hereinafter).

Independent Claims 1, 16 and 17

Independent claims 1, 16, and 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over El-Shimi et al. in view of Aboulnaga. Regarding claim 1, the Examiner asserts that El-Shimi discloses "providing a set of subscriptions, at least one of the set of subscriptions comprising a tree pattern, wherein the tree pattern comprises one or more interconnected nodes having a hierarchy and adapted to specify content and structure of information" (FIG. 5: elements 501-504; col. 8, lines 15-25 and 51-62). In the Response to Arguments section of the final Office Action, the Examiner asserts that El-Shimi discloses that "the decision tree being restructured according to the subscription request."

Applicants note that El-Shimi discloses a *filter tree, **not a subscription tree.*** In the text cited by the Examiner, El-Shimi teaches that, "for larger numbers of subscription requests, the filter 310 may use a ***tree of filters*** as illustrated by the filter tree 400 of FIG. 4." (Col. 8, lines 58-60; emphasis added.) Regarding filter tree 400, El-Shimi teaches that

> FIG. 4 illustrates an example filter tree 400 that may be used within the filter 310 of FIG. 3. The filter tree 400 is designed to reduce or even minimize the number of filters that must deal with event notifications. For example, suppose that the event subscriptions are only for events that are fired by processes identified by an identifier 5 or an identifier 6. The root filter 401 in the filter tree 400 may filter out any event notifications that were not fired by processes 5 or 6. In the illustrated example in FIG. 4, the event passes the filter 401. Events received at a filter are represented by arrows arriving at the left portion of the filter. Events passing the filter are represented by arrows emitting from the right portion of the filter. An arrow with an "X" superimposed means that that would have been the event flow had the event not already been filtered

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out by some upstream filter. Arrows without the superimposed "X" means that the event notification has not been filtered out by an upstream filter. (Col. 9, lines 31-47.)

5   El-Shimi teaches that the Query Filters 311, 312 are separate entities from the Subscription element 303. (See, FIG. 3.) Thus, El-Shimi does *not* disclose or suggest that the *subscription(s) 303 comprise a tree pattern*. Independent claims 1, 16, and 17 require providing a set of subscriptions, at least one of the set of *subscriptions comprising a tree pattern*, wherein the tree pattern comprises one or more interconnected nodes having a hierarchy and adapted to specify content and structure of information.

10   Regarding the Examiner's statement concerning "the decision tree being restructured according to the subscription request," please note that El-Shimi actually teaches that "the decision tree may be restructured *every time a subscription request is received*." (Col. 9, lines 63-64; emphasis added.) Applicants submit that a restructuring according to a subscription request is broader than the actual teaching in El-Shimi. In any case, the citation

15 from El-Shimi does *not* disclose or suggest that the *subscription(s) 303 comprise a tree pattern*.

          The Examiner further asserts that El-Shimi explains "the assignment of the subscription to the root level filter till the rebuilding of the filter tree." This statement, also, does *not* disclose or suggest that the *subscription(s) 303 comprise a tree pattern*.

          Finally, the Examiner asserts that El-Shimi teaches that the event notifications are

20 matched against the subscriptions and these are in XML format. The Examiner asserts that the XML format is a tree structure and, if the comparison and matching were being done, then it would be obvious for the event notifications and the subscriptions both to be in the tree pattern (see col. 2, lines 64-67, and col. 3, lines 1-8, of El-Shimi).

          In the text cited by the Examiner, El-Shimi teaches that

25   the channel then receives event notifications from one or more event sources. The event notification may take the form of an XML fragment. The channel then determines the position that the received XML fragment would take as dictated by the schema definition. For each subscription, and for each event notification, the channel matches the event notification against the subscription. In

30   particular, the channel determines whether the position and attributes of the event

notification match the position and attributes of the event subscription. If a match is found, then the event is copied and forwarded to the recipient designated in the corresponding subscription. If a match is not found, then the event is not copied. (Col. 2, line 64, to col. 3, line 8.)

5   First, El-Shimi actually discloses that the "event notifications may take the form of an XML fragment." (See, above citation.) El-Shimi does *not* disclose or suggest that subscriptions are in XML format or comprise tree patterns.

Second, Applicants do *not* see any disclosure or suggestion that having both the event notifications and the subscriptions in tree patterns is advantageous for performing a
10   comparison.

Finally, in the absence of such teachings, a person of ordinary skill in the art would not read El-Shimi as suggesting that subscriptions are in the XML format, or that subscriptions comprise tree patterns.

Thus, El-Shimi et al. and Aboulnaga, alone or in combination, do not disclose or
15   suggest providing a set of subscriptions, at least one of the set of subscriptions comprising a tree pattern, wherein the tree pattern comprises one or more interconnected nodes having a hierarchy and adapted to specify content and structure of information, as required by independent claims 1, 16, and 17.

Dependent Claims 2-15

20   Dependent claims 2-15 were rejected under 35 U.S.C. §103(a) as being unpatentable over El-Shimi et al. in view of Aboulnaga.

Claims 2-15 are dependent on claim 1 and are therefore patentably distinguished over El-Shimi et al. and Aboulnaga (alone or in any combination) because of their dependency from independent claim 1 for the reasons set forth above, as well as other elements these claims
25   add in combination to their base claim.

All of the pending claims, i.e., claims 1 through 17, are in condition for allowance and such favorable action is earnestly solicited.

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If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

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Respectfully submitted,

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